REMARKS

In the Final Office Action[1] mailed October 6, 2006, the Examiner rejected claims 1-20 under 35 U.S.C. § 102(b) as being anticipated by Richardson et al. (U.S. Patent No. 6,633,856, hereafter "Richardson") as in the non-final Office Action mailed April 17, 2006.

By this Amendment, Applicants amend claims 1, 4, and 20, and claims 1-20 remain pending.

Applicants respectfully traverse the rejection of claims 1-20 under 35 U.S.C. § 102(b) as being anticipated by Richardson.[2]

Claim 1, as amended, recites a decoding method for decoding LDPC codes, the LDPC codes being represented by an original check matrix, the method comprising, for example:

> an obtaining step of permuting at least two columns or two rows of the original check matrix to obtain a transformation check matrix. (Emphasis added).

Richardson discloses at column 18, lines 26-37:

> For purposes of gaining an understanding of vectorizing LDPC graphs consider a 'small' LDPC code with parity check matrix H. The small graph, in the context of a larger vectorized graph, will be referred to as the projected graph. Let Ψ denote a subset of ZxZ permutation matrices. We assume that the inverses of the permutations in Ψ are also in Ψ. Given the small, projected, graph we can form a Z-times larger LDPC graph by replacing each element of H with a ZxZ matrix. The 0 elements of H are replaced with the zero matrix, denoted 0. The 1

[1] The Office Action may contain statements characterizing the related art, case law, and claims. Regardless of whether any such statements are specifically identified herein, Applicants decline to automatically subscribe to any statements in the Office Action.

[2] Richardson is not prior art against this application under 35 U.S.C. § 102(b). This application is the U.S. National Stage of an International Application filed on April 19, 2004, within one year of the publication date of Richardson, October 14, 2003.

> elements of H are each replaced with a matrix from Ψ. In this manner we 'lift' an LDPC graph to one Z times larger.

(Emphasis added). Accordingly, vectorizing LDPC in Richardson is achieved by replacing each element of check matrix H with a ZxZ permutation matrix. Therefore, Richardson does not disclose or suggest "permuting at least two columns or two rows of the original check matrix to obtain a transformation check matrix," as recited in claim 1.

Further, amended claim 1 does not specifically recite the generation of permutation matrices, and a teaching of permutation matrix generation does not suggest "permuting at least two columns or two rows of the original check matrix to obtain an transformation check matrix," as recited in claim 1.

In view of the above, Richardson fails to teach each and every element of independent claim 1. Independent claims 4 and 20, while of different scope than claim 1, recite subject matter similar to that of claim 1, as discussed above. Accordingly, Richardson also fails to teach each and every element of claims 4 and 20. Claims 1, 4, and 20 are allowable. Claims 2-3 and 5-19 depend respectively from claims 1 and 4, and are thus also allowable at least due to their dependence from claims 1 and 4.

Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 1-20 in condition for allowance. Applicants submit that the proposed claim amendments do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner. Therefore, this Amendment should allow for immediate action by the Examiner.

Alternatively, Applicants submit that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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